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## CLINICS.

### CLINICAL LECTURE.

*Clinical Lecture on Latent Scarlatina followed by fatal Uræmia.*—By CHARLES MURCHISON, M D., Physician to the Middlesex Hospital and Lecturer on the Practice of Medicine.

Gentlemen: The important practical lessons to be learnt from the case which to-day I bring under your notice will, I trust, be indelibly impressed upon your memory. We have just been witnessing the post-mortem examination of the body of William C——, aged twenty, a French-polisher, who was admitted into the hospital on Sept. 27th, 1869, and who, during life, presented all the symptoms in a typical manner of acute nephritis. About a fortnight before admission dropsical swelling had appeared in his legs, and his friends had noticed a puffy swelling of the face. The urine at the same time became scanty and high-coloured, and during the week prior to admission he had suffered from headache and occasional vomiting. Throughout the fortnight the bowels had not acted except after taking purgative medicine. At the time of admission there was considerable general anasarca; the face was puffy, pasty, and anæmic; but there was no evidence of fluid in the serous cavities. The pulse was 72, and the respiration 16; the physical signs of the heart and lungs were normal; tongue slightly furred, appetite good, but frequent retching of watery fluid; bowels freely open by medicine. Much headache; pupils large; little sleep, but mind clear. No pain nor tenderness in loins. Urine scanty, of sp. gr. 1018; deposited after boiling two-thirds (in volume) of albumen, and contained numerous blood corpuscles and renal epithelium cells. No desquamation of cuticle.

The proper treatment in any case presenting the symptoms now described is to

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relieve the kidneys by inducing free action of the skin and of the bowels. Accordingly the patient had a warm bath and afterwards was kept warm in bed; half a drachm of compound jalap powder was given at once, and a draught containing two drachms of liq. acet. ammoniæ and a scruple of acetate of potash was ordered to be taken every four hours. On the following day the patient seemed better; there was moderate perspiration, but the bowels had acted only slightly. A drachm of compound jalap powder was now ordered. Through some negligence on the part of the nurse, this powder was not given; but in the evening the bowels acted twice, and the patient was very improperly permitted on both occasions to traverse the whole length of the ward in going to the water-closet. After this he slept well till five next morning, when he passed some urine less smoky than before, but containing one-half of albumen. Shortly after this the nurse's attention was attracted by his breathing being loud and stertorous, as if he were recovering from a fit. At 5.30 the jalap powder was given, but at 6, and again at 7, he had a fit of violent convulsions, with foaming at the mouth and lividity of the face. He regained consciousness after these fits and complained of intense headache. He had a warm bath after the second fit; but at 8 A.M. he had another fit, and after this he remained in a state of profound stupor and great restlessness, interrupted by a return of the convulsions about every half-hour, until his death about 7 P.M. The pupils were mostly contracted, but dilated during the convulsions. No urine was passed after 5 A.M., and the breath had a fetid ammoniacal odour, but there was profuse perspiration. A bladder of ice was kept applied to the head, and at my visit at 1 P.M. two drops of croton oil were given by the mouth, and the patient was bled from the arm to 14 oz. For about half an hour after the bleeding there seemed to be a slight improvement; the patient was less restless, his breathing was quieter, and his expression less heavy.

At the autopsy, the blood throughout the body was found to be black and fluid. The spleen was large, weighing 10 oz., and diffluent, like the spleen of typhus. The heart was healthy, and the lungs congested. The peritoneum contained 6 oz. of clear serum, the pericardium 2 oz., and each pleura about 4 oz. The brain presented nothing abnormal beyond considerable congestion and an ounce of clear serum at the base. Both kidneys were much enlarged, weighing together 15 oz.; their surfaces were smooth, and their capsules here and there slightly adherent. The cortex was much hypertrophied and generally pale and opaque, but the pyramids and the Malpighian bodies were intensely congested and dripped with blood on section. The uriniferous tubes were crammed with granular epithelium, and some of them contained extravasated blood. The bladder was empty.

Here, then, we had a typical case of acute nephritis proving fatal by suppression of urine and blood poisoning. The small quantity of urine voided immediately before the fits had probably been secreted some time before; none was secreted afterwards. The fact, however, that the case was a good illustration of acute nephritis was not the chief reason that induced me to make it the subject of this lecture. It is to the cause of the attack that I wish particularly to direct your attention. Almost all of the cases of acute nephritis which you meet with in practice are referable to one of two causes, viz: 1, a chill, as from exposure to cold and wet; and, 2, some poison in the blood, and especially that of scarlet fever. With regard to a chill, you must remember that it is only under exceptional circumstances that it excites nephritis. Supposing twenty or thirty persons all exposed to the same cause of chill, nephritis would occur probably in only one; and it would be found that this person was of adult or more advanced life, and that he had either led an intemperate life or had previously given evidence of chronic disease of the kidneys. Our patient, however, was young; he had previously enjoyed good health, and been very steady and temperate. For these reasons, and knowing how usually prevalent scarlet fever is at this time, one of the first questions I put to the patient was whether he had recently recovered from scarlet fever; but both he and his friends denied all knowledge of his having suffered from it or of his having been exposed to it. It was only on cross-examination that we discovered that a month before admission, or a fortnight before the appearance of the dropsy, the cuticle had peeled off his hands, and

that for this he consulted a surgeon, who prescribed an ointment. While this desquamation was going on he felt weak and out of sorts, and he went to Weymouth for four days. On his return his friends observed that he did not seem much the better for his holiday, and he first felt his throat a little sore; but, prior to the desquamation, he had not had sore-throat nor eruption, and he had not given up work. It was further ascertained that, while this desquamation was going on, his three younger brothers and sisters were confined to bed for two or three days with sore-throat and fever, and his elder brother, although he had no sore-throat, and did not give up work, also felt ill. No eruption was observed in any of the four. In the face of these facts, no one will dispute that the nephritis in our patient was determined by an attack of scarlet fever.

The practical lesson which I wish you to learn from this case is, never to neglect a mild case of scarlet fever. You will constantly be consulted in the case of children who, after a known exposure to scarlet fever, have the symptoms in so mild a form that they are scarcely thought to be ill. The practice is far too common of permitting such patients to be up and to go about as usual; and, indeed, in more developed cases of scarlet fever, the patient is often allowed to leave his bed much too soon. In numberless instances I have known this practice result in nephritis, sometimes terminating fatally by uræmia, or by secondary pericarditis, pleuro-pneumonia, gastro-enteritis, &c.; and at other times ending in chronic, but permanent, degeneration of the kidneys. During the third and beginning of the fourth week of scarlet fever, the urine often contains albumen, and the kidneys are more or less congested. You would be astonished to find how much albumen may sometimes be present, without any dropsy or other symptom of renal disease. But if during this time the transpiration of the skin be checked from any cause, the congestion of the kidney may become converted into nephritis. It is a good rule, therefore, to keep every patient recovering from scarlet fever in bed or in a warm room for at least three weeks from the commencement of the attack, and not even then to permit a change if desquamation be going on, or if the urine contain albumen. The rule is sometimes difficult to enforce; but the present inconvenience of the practice ought to weigh for little against the possible dangers from this neglect. For nearly ten years this rule has been followed at the London Fever Hospital with this result, that nephritis as a sequel of scarlet fever has, during that time, been almost unknown there, except when it has occurred prior to the patient's admission.

Lastly, the neglect of slight cases of scarlet fever probably contributes much to the spread of the disease. Many observations have satisfied me that the attacks of sore-throat, to which even adults (who may already have had scarlet fever) are liable after much exposure to scarlet fever, may be the means of propagating the disease; and you must bear in mind, what I have so often told you, that the most malignant attack of scarlet fever may be contracted from a person suffering from it in the mildest form. The nature and severity are determined by the constitution of the recipient rather than by any difference in the quality of the poison.—Lancet, May 21, 1870.

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*Intussusception in an Infant cured by Inflation of the Bowel.*—W. S., æt six months, admitted into Guy's Hospital March 28th, 1870. The child appeared in perfect health until yesterday afternoon about four o'clock, when, whilst sucking a crust of bread, he suddenly screamed out, fainted, and became cold. The mother took him to a doctor, who gave him a powder, which made him very sick. He continued in great pain, and cried incessantly. At three o'clock this morning he passed a quantity of clotted blood per rectum, and this continued to run from him until he was admitted into the hospital at twelve o'clock. The last fecal evacuation took place at noon the previous day.

On admission, the child was seen to be well grown, but face pale, and had a generally collapsed appearance. On examining his abdomen, a lump was distinctly felt to the left and above the umbilicus, which hardened when pressed upon. On passing the finger up the rectum a round projection could be felt about four inches up, with a circular orifice in the centre. The finger, when withdrawn, was covered with blood. The case being thus clearly one of intussusception, Dr. Wilks ordered inflation of the bowel by means of a bellows. Chloro-

form was given, and an enema tube passed into the rectum, the other end being attached to the bellows. The attempt to inflate was at first unsuccessful, owing to the large size of the rectum; but by increasing the width of the tube by wrapping a strip of lint round it, the colon was well inflated, and then the lump gradually went back until it quite disappeared. A drop of opium was ordered in a drachm of dill-water, and the breast to be given sparingly.

On the following day, March 29th, no lump could be felt. The child had been sick several times, and nothing had passed per rectum. To repeat the medicine.

March 30th, child very irritable; apparently much tenderness over abdomen, especially towards the right side. Occasionally sick. Passed a little blood, but no feces.

31st, evidently better. Had a liquid evacuation with no blood, and sucks well.

April 1st, passed a natural motion, and altogether better.

2d, child apparently well, and taken out by the mother, who was somewhat discontented at the operation performed on him, as she never could be made to realize the severity of the case.

He remained well until the 10th, when he was brought to the hospital, having had fresh bleeding, and the lump could again be felt. The mother would not allow the child to be again taken in for the purpose of a renewal of the method which had been before so successful, but took him away for the purpose of procuring some physic for him; and no more was heard of the case.

Dr. Wilks remarked that this was a good model case of intussusceptio and of the appropriate treatment. The nature of the involution was of the usual kind—the ileum into the cæcum, and the subject a boy, as is most commonly the case. There was, however, one symptom which had not been hitherto remarked, viz., the collapse at the time of the occurrence of the passing in of the bowel. The sickness and constipation denoted intestinal obstruction, and the passage of blood, that this was caused by intussusceptio. This symptom was first clearly established as a characteristic sign of this accident, by Mr. Gorham, who wrote an excellent article on the subject in the Guy's Hospital Reports for the year 1838. If there had been any doubt as to the nature of the case, this would have been removed by the discovery of a tumour in the abdomen, which contracted on being handled, and by the fact of the rosebud-like projection to be felt in the rectum. This showed that the intussusceptio was very extensive. The treatment was then clear, and, in other cases, was completely successful. Dr. Wilks's wish was to keep the child in for some time, continue the opium, and feed him most sparingly. It was also discussed whether a pad over the abdomen might be efficacious in preventing a return of the intussusceptio.—Lancet, May 21, 1870.

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*Clinical Remarks on the Diagnosis of Diseases of the Stomach and Œsophagus.*—An emaciated man, æt. 53, was admitted into Guy's Hospital, under the care of Dr. Wilks, May 11th, with supposed disease of the stomach. The following were the chief points in the history of the case: for eight months past severe pains over the stomach, and almost immediate return of swallowed food, particularly of meat and dry solid matter; profuse hæmatemesis on two occasions; loss of flesh. Dr. Wilks stated that in cases of this kind it was necessary for the medical attendant to find out for himself whether there was immediate regurgitation of the food after deglutition, or vomiting occurring sooner or later after this act, but still not until the passage of the food into the stomach. The former symptom would indicate some contraction of the œsophagus; the latter, disease of the stomach, probably cancer or gastric ulcer. Hemorrhage from the stomach varied very much in amount, according to the nature of the case; in cases of gastric ulcer it might be slight or severe; but when due to liver disease it was always excessive, since the bleeding must necessarily be associated with extreme engorgement of the portal system. Pain in the epigastrium was invariably present in cases of vomiting, even with sea-sickness. Severe fixed pain was not a constant symptom of ulcer of the stomach; occasionally it was very slight, and not a source of complaint, whilst in other instances it was very acute. In the latter class of cases the peritoneal coat of the stomach was generally involved in the ulceration, and had probably become adherent to some neighbouring part. In one case, related by Dr.

Habershon, twigs of the pneumogastric nerve were found involved in the margin of the ulcer. Dr. Wilks was inclined to look upon the present case as one of disease of the œsophagus, since the food was either regurgitated immediately after deglutition, or, when retained for a short time before its return, was distinctly felt by the patient himself in a fixed position at the lower end of the gullet. Small fragments of toast or dry bread could be passed into the stomach with difficulty, but the bolus when mixed with tea or some other fluid was immediately returned. Dr. Wilks did not look with any favour on the plan of passing bougies for the treatment of disease of the œsophagus from morbid deposit. The contraction of this tube from this cause is not of inflammatory origin, nor analogous in any way to a stricture of the urethra, and cannot be treated with success by a process of stretching.—Lancet, June 4, 1870.

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### HOSPITAL NOTES AND GLEANINGS.

*Clinical Notes from the Practice of* Dr. Wilks, of Guy's Hospital. *Intermittent Tetany.*—J. T. R., æt. 3, was admitted March 23, 1870. He had always had good health except during the time of the occurrence of infantile disorders. On March 17th, whilst having his face washed, he complained of pain in his feet, and asked to have his boots taken off. As soon as this was done, his feet were found to be contracted. He was brought to the hospital in the afternoon, when three grains of gray powder were ordered. The spasm gradually passed off, and he continued better until the following Monday, when his legs were again suddenly contracted. The spasm evidently caused him a good deal of pain, as he screamed loudly; it lasted about ten minutes, and then subsided, but his feet did not regain their natural position afterwards. The spasms occurred several times during this day, and became less severe on the next. This morning the child had a severe spasm, in which the hands were also affected; the fingers remained extended afterwards. On admission, both legs were affected, the feet being drawn into the same position as in talipes varus, the calf of the leg being very hard; the knees were flexed, and the thighs on the abdomen. The muscles of the arm were less affected, the fingers being extended and brought together in a conical form. The child was constantly calling out from the pain caused by the cramp, and was continually moving from side to side in the bed in order to procure relief. The legs were rubbed, but with no apparent benefit, and so cold water bandages were applied; these evidently afforded ease, as he immediately became tranquillized. He was also ordered ten grains of hydrate of chloral three times a day. On the following day, March 24th, the spasms were not so severe, and had only occurred in paroxysms three or four times in the twenty-four hours. On the 25th, the spasms were gradually passing off. No effect was produced by pressing on the femoral artery. On the 27th. there were no spasms, but the feet remained contracted. After this, the spasms gradually wore off and he left the hospital.

Clinical Remarks by Dr. Wilks.—Dr. Wilks remarked that such cases were more common than was supposed, but had hitherto received less consideration than they deserved, on account of the absence of a distinct appellation by which to know them. But when such terms as idiopathic musclar spasm had made way for a definite name as intermittent tetany, a fresh interest was thrown over the disease. Such a name, given by Trousseau, was quite justifiable when the same group of symptoms were constantly seen to occur in different individuals. The disease is mostly met with in children, and might be passed over as one of convulsions; but the recurrence of the symptoms and those characterized by tonic spasms, show the disease is a peculiar one. A child may be ill a few days and then recover; or the complaint may continue for a much longer period, and the whole body be affected, as in tetanus, whilst in others the limbs may be alone involved. The legs are drawn up towards the body, and the muscles are rigid, as in cramp; the arms may also be affected in the same way. If most of the cases were of this description, and like that of the boy in the present instance, the term tetanus might be objected to, seeing that in the tetanic state, excepting during the violence of the paroxysms, the spasmodic rigidity is confined to the neck, chest, and abdomen, those parts, in fact, which are more especially employed in respiration, whilst the limbs remain flaccid; there is in this an important distinction between the

effects of tetanus and those of strychnia. In the present case, the spasms were confined to the limbs. The disease has always been regarded as a functional one, both on account of the remission of the symptoms and its non-fatal character. It might also be remarked how the fingers are extended and held stiffly together, just as is seen in hysteria, and it also sometimes happens that there is some amount of anæsthesia. As regards the cause of the disease, since teething, worms, etc. are sufficient to produce convulsions, so it has been conjectured that like causes may be present to produce intermittent tetany. This boy was a remarkably fine and muscular lad, and no cause whatever could be thought of sufficient to produce the malady. As the boy was suffering much agony, chloral was suggested, and this he took for some time; but, in order to afford immediate relief, some cold bandages were wrapped round the limbs. These were suggested by the remembrance of their great service in the cramps of cholera. As the disease under discussion subsides spontaneously, and as in this very case the paroxysms had already, on more than one occasion, rapidly abated, little can be said of the merits of the remedies employed.—British Med. Journ., June, 1870.

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*Ague treated by Bromide of Potassium in Guy's Hospital.*—It is known that bromide of potassium was first introduced into medical practice, as a remedy for enlargement of the spleen, by Dr. Williams. Reference to the cases which are given in full in his Practice of Medicine does not, however, show any relation of the remedy to ague-poison more especially than other causes of enlarged spleen. It was a spleen-remedy, and not an ague-remedy, that it was found useful. During the last four months, trials have been made at Guy's Hospital, among the out-patients, of the use of bromide of potassium in ague. The results are such as to show that this drug possesses a very remarkable power over ague, and a power that promises to be of important use in many of the more obstinate cases. Dr. Moxon has had several instances of its successful use; and two of these were in persons who had taken quinia for a length of time without benefit. The following is a short note of one of these cases:—

J. P., aged 27, a joiner, had been laid up for two months with tertian ague. It presented this peculiarity, that at the first onset it continued its course for a fortnight, and since that time had alternated weekly; so that he shivered every third day in one week, and was free from shivering the next, and so on—a week of ague following a week of rest. His spleen was three inches below the false ribs in the mammary line. He had the look of ague, but had not lost much flesh. He took quinia nearly from the first constantly, but did not get any better. He came to Guy's Hospital as an out-patient under Dr. Moxon on January 10th, and then commenced taking scruple doses of the bromide of potassium thrice daily. On the 17th, he said he had had no shaking the previous week, though it was the week when he ought to have shaken; but he had had some headache. The dose was increased to half a drachm three times a day. He never had a fit after taking the bromide; and on the 24th of January his spleen had gone up, so that it was only one inch below the ribs. He remained under treatment until February 28th. On presenting himself then, he said that he had had no more ague-fits; he felt bodily stronger and better than when he first came, and his spleen was scarcely to be detected by the fingers. The so-called "bromism" had not been produced in him. His fauces and conjunctivæ were sensitive as those of other people.

The other patient had applied on the same day as this man, and had given a very similar account of herself; *i. e.*, ague for many weeks, and continual use of quinia without benefit. The bromide was prescribed; and, after attending once and reporting benefit, she ceased her attendance on the following week.

The following case shows still more strikingly the usefulness of the remedy:—

J. S., aged 19, a gardener, from Streatham, came under Dr. Rees's care with tertian ague on June 13th, 1869. He stated that he had had paroxysms of ague every third day, between four and five in the afternoon, for the last two months; and had taken quinia during the whole of that time, but had derived no benefit or relief of any kind therefrom, and consequently sought relief at this institution. On admission, he had the general appearance of a healthy lad, but complained of tenderness in both hypochondriac regions. There was extended

dulness over the liver, and also over the spleen. On the following day, he was ordered two grains of quinia in infusion of gentian three times a day. On the 14th, he had another paroxysm. On the 20th, the dulness over the liver and spleen was more extended; and on the 27th it was noted that no benefit had arisen from the quinia. He was accordingly ordered twenty grains of bromide of potassium in infusion of gentian three times a day. On June 30th, he was noted to have been free from attacks since the 27th, and felt better. On July the 3d, the splenic dulness was diminished, and he felt well. On July 7th, he was discharged well. During this patient's stay in hospital, he had taken eighty-four grains of quinine without benefit; but, after the first drachm of bromide of potassium, he pronounced himself materially relieved.

A considerable number of other more recent cases have been treated in the same way; and this has been the general result —that the bromide always checks the ague, so that for one or two weeks the patients have no seizures; that in some of the cases the cure is permanent, even while the patients still continue to reside in the place where they took the ague; but that in many cases when the patient is still in the ague-district, the ague-fits return after one or two weeks of free interval.

Thus it appears that the bromide of potassium is a remedy well worth a trial in cases of ague that do not yield to quinia, or in cases where the patient has left the place where he was seized with the poison; but it is not pretended that, for the general cure of ague, it would compete in advantages with quinia. Dr. Moxon took the suggestion of its use from Mr. Walter Buchanan, a student of Guy's Hospital, to whom all credit for the notion is due. It certainly appears that a new and important service of the bromide is here shown; and it is interesting to compare this result with the power which iodine and iodide of potassium have shown in curing ague, as reported in Virchow's *Archiv*, xlix.—Ibid.

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*Neuralgia of Supraorbital Nerve; Division of Nerve; Recovery.*—The following case of this was treated at the Royal Infirmary, Edinburgh. W. D., æt. 40, healthy, had suffered from tic in the jaw for five years. The pain during that time, although not constant, had occurred in paroxysms almost daily, and was usually very severe. Commencing at the supraorbital foramen, the pain passed downwards over the right cheek and upwards to the forehead; and for some months past it had been of a most excruciating lancinating character. He had been treated by many of the most skilful practitioners with almost every conceivable remedy for the affection, both internal and external, including quinia, iodide of potassium, mercury in large and small doses; purgatives of all sorts, such as croton oil; liniments of every description; chloroform, blisters, opium in all shapes, endermically and hypodermically; aconite, iron, bebeeru, etc., but all without relief.

Upon examination, the teeth were found all sound. The pain was daily intense, and lately had become so agonizing that the general health was beginning to suffer. As the patient was willing to submit to any measure likely to procure relief, the following operation was performed.

Dr. Joseph Bell made a T-shaped incision over the supraorbital foramen, and exposed the nerve. A portion of this, about the third of an inch in length, was excised. On coming out from the effects of the chloroform, the patient stated that the neuralgic pain had disappeared; and from this time till the present it has never returned. He was discharged from the hospital about a week afterwards, perfectly well, and without having experienced the slightest twinge from the pain from which he had been suffering for so many years.

In connection with this case, Dr. Joseph Bell remarked that in his experience the above result, with a few exceptions, generally followed division of the nerve in this affection; the recovery, however, being only temporary. The patient, he says, usually remains perfectly free from suffering for three or four months, after which time the pain gradually returns, and the operation has again to be performed, with a like result.—British Med. Journ., May 21, 1870.

*Neuralgia of Dental Nerve, treated with Chloral; Relief.*—Royal Infirmary, Edinburgh. J. F., æt. 65, had, for the last six months, been suffering from neuralgia of the dental nerve of the right side. The pain was intense, occurring in paroxysms almost hourly, and shooting downwards in a lancinating manner throughout the entire

course of the dental nerve. For the relief of this, nearly all the teeth of that side had been removed; and all the ordinary remedies, both internal and external, had been employed without effect. On admission, he was suffering the most intense agony, and he was emaciated and careworn from constant suffering. Hypodermic injections of bimeconate of morphia and atropia, with bebeeru, quinia and iron internally were administered without any beneficial effect. It was determined to give the hydrate of chloral a trial. Forty grains were taken in the morning. In the course of ten minutes, the pain began sensibly to diminish, then gradually continued to decrease in severity, and in ten minutes more altogether disappeared. During this time he had not the slightest desire to sleep. The patient remained in perfect comfort for about half an hour, at the end of which time the neuralgia again gradually returned. Another dose of the medicine produced the same relief, which, however, never lasted more than about half an hour. This experiment was frequently repeated, and always with similar results; but it was remarked that in the course of a week the chloral, even although the dose was greatly increased, seemed to lose this anodyne effect, and did not relieve pain without causing sleep. As a commentary upon this case it may be stated that, after all the ordinary remedies failed to remove this distressing symptom, chloral produced temporary relief. The remarkable feature, however, is that chloral, contrary to the general opinion of its action, seemed to produce in this instance a true anodyne effect, viz., the relief of pain without causing sleep. That this was not altogether a coincidence was shown by the repeated observations made upon the case, the administration of the drug always being followed by temporary cessation of pain. Lastly, it would appear that here chloral lost its effect upon the system; as, to produce in this man beneficial results, the dose had to be gradually increased; and, finally, although he took so much as seventy grains, no anodyne action followed.—Ibid.

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## MEDICAL NEWS.

### DOMESTIC INTELLIGENCE.

*Reduction by Manipulation, of Dislocated Hip-Joint.* By WILLIS ALSTON, M. D., of North Carolina, formerly resident student in the Baltimore Infirmary.—J. C. D., æt. 33, was admitted into the Baltimore Infirmary on the 25th November, 1868; a man of fine muscular development. On the 23d of November, after taking several drinks of liquor, he was riding in a buggy alongside of two other persons. His condition, together with the unfavourable position which he occupied, soon caused him to lose his equilibrium, and, falling from the vehicle, he dislocated the head of the right femur. He was thence taken home, and three physicians were summoned, who, after long and repeated attempts at reduction (under chloroform), failed to accomplish it. A certificate to that effect was sent with the patient. When admitted to the house the dislocated limb presented a shortening of two inches, with the toes resting on the opposite instep; the knee turned inwards, and somewhat advanced upon the other; the trochanter not so prominent as the one of the opposite side, and approaching the spine of the ilium. The head of the bone could not be felt in its new position on account of the muscularity of the patient. On the 28th of November, five days after the infliction of the injury, the patient was brought before the class for examination. Prof. N. R. Smith, after a careful examination in the presence of the class, and many other eminent medical gentlemen, found the limb considerably swollen and very painful, with much discoloration, and pronounced it a dislocation of the head of the femur, upwards, on the dorsum of the ilium. He spoke of the various methods which had been adopted for the reduction of that dislocation, but he preferred the one by manipulation, in which no apparatus was used. The patient was thoroughly chloroformed, to the almost perfect relaxation of his whole muscular system. Prof. Smith, standing upon the patient's right, who was placed on a convenient table, seized the ankle of the right leg with his right hand, and the knee with his left, with the aid of assistants, he forcibly flexed the thigh upon the pelvis, and the leg upon the thigh, leaving the knee then in the vicinity of the left shoulder; then, firmly holding the foot in this inverted position, the knee was pushed as far to the right as possible—everted; then aversion of the foot, followed by complete extension of the limb (using the length of the limb as a lever), finished the mechanism of the reduction, which was so

complete, and so skilfully accomplished that, with a snap audible over the entire amphitheatre, the head of the bone slipped into the acetabulum. The patient suffered for some hours afterwards, with severe pain, and next day the thigh swelled considerably. However, with only a liniment to the part, the patient did well, and, in a few days, left the house in a good condition.

LITTLETON, N. C., July 1, 1869.

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*Case of Fracture of the Thigh caused during Delivery.* By COMEGYS PAUL, M.D.—On the 12th of April last an infant, three days old, was brought to my office, suffering from what the nurse called "something the matter with its leg."

It appears that the mother had been attended during confinement by a woman in the neighbourhood, following the combined occupations of "midwife and layer-out of the dead." Whether she endeavoured to make two cases out of this one I am unable to say; however, she told me that it was a "crossed birth," and that she was compelled to use forcible means in order to save the mother's life, not at all expecting the infant to be born alive.

Upon examination I found the limb much swollen, marked deformity of thigh, and the child appearing very restless and uneasy, with slight fever. Could distinctly feel the fractured part at the junction of the middle and upper third, and observed a very perceptible mobility of the fragments. The length of the injured limb measured from the inside was 6½ inches, the sound one was 7 inches.

I applied a pasteboard splint, reaching from the trochanter major to the external malleolus, fastened by adhesive strips and a bandage. The only difficulty experienced was to keep the dressing dry, the constant discharge of urine and feces tending to an irritable chafing of the parts. This was remedied by frequent cleansing and the copious use of oxide of zinc. At the end of the second week the splint was removed, and perfect union the result. Upon measurement both the limbs proved to be of the same length, the internal malleoli corresponding exactly, although there was slight antero-posterior flexion of the united bone.

Saw the case one month afterwards, and the deformity was not perceptible.

PHILADELPHIA, 1521 PINE STREET.

*Commencing Carbuncle arrested by the Application of Nitrate of Silver.* By B. F. Mebane, M. D., of Mebanesville, N. C.—I was called to see Mrs. E. W., who was suffering with the most excruciating burning pain from a large carbuncle on the inner portion of the thigh. It was very hard, of a blood-red colour, and about two inches in diameter. I moistened the inflamed surface with water, then took a stick of arg. nit. and applied it freely to the indurated and inflamed part. The patient complained for ten minutes very much of the burning from the application, and in fifteen minutes after the first application was entirely free from pain, and required no farther treatment. The relief was perfect.

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*Abnormal Condition of the Umbilical Cord, Diminution in the Size of the Vessels, and Defective Nutrition of the Child.* By A. ED. WILLIAMS, M. D., of Springboro, Crawford County, Pa.—Mrs. W., aged 21, primipara, had suffered during some months of gestation, with intermittent fever, attended with occasional attacks of the most distressing cephalalgia. The disease seemed unusually obstinate, notwithstanding the free and continued use of quinia. A chill occurred only a week prior to labour, which took place June 10th, and this was probably a few weeks before full time.

The head presented, and labour was in all respects satisfactory. The child, however, was very small, weak, and shrivelled, and vigorous efforts were necessary to establish respiration. The cord was double the ordinary size, very white and translucent, and of almost cartilaginous hardness, so much so that it was found necessary to dress it in the erect position. No fluid whatever exuded from the cut extremities, and the vessels were scarcely to be seen at all, so diminutive was their size. The placenta was apparently quite normal. The child was with difficulty kept breathing, and lived but 20 hours.

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*Deaths from Chloroform.*—In the "Boston Herald" (quoted in the May No. of the "American Journal of Dental Science") will be found the notes of a case of death from chloroform, administered for the extraction of twelve teeth. The patient, Mrs. Bradford Toote, of Sheffield, had partly recovered consciousness after the operation when she suddenly seemed to

choke, and died in a few moments in the dentist's office, at Great Bonnington, Mass.

In the mortality reports of deaths in the city of Boston, for the week ending April 9th, is one of a man, aged 65, who died "during inhalation of chloroform at Deer Island."—Bost. Med. and Surg. Journ., April 14, 1870.

## FOREIGN INTELLIGENCE.

*Physiological Action of Carbonic Acid.*—At his last lecture, Dr. RICHARDSON took for his subject some new and curious points relating to the physiological action of carbonic acid. After briefly describing the chief physiological facts ascertained since the discovery of carbonic acid as a product of the respiratory process by the illustrious Black, the lecturer proceeded to illustrate the effect of carbonic acid on animal and vegetable fluids. He said that his friend, the eminent chemist, Dr. F. Versmann, in studying the manufacture of some medicinal waters, had found, much to his annoyance, that when carbonic acid, with a little soda, was brought into contact under pressure with some vegetable infusions, the gas was fixed to a large extent, and the infusion was quickly transformed into a thick glairy fluid. Some infusion of orange and gentian treated in this manner was shown; the liquid was beautifully transparent, but glairy and thick, and, when transferred from one vessel to another, it turned out in a mass like albumen. The observation suggested to Dr. Richardson the importance of experimental inquiry as to the influence of carbonic acid on animal fluids, on the mucous secretions of the air-passages, on albumen, on serum, on solution of muscle, on fibrine, on blood, on blood-corpuscles, on bile, milk, and other animal secretions. He now showed some of his results, especially those relating to the precipitation of colloids. Albumen was shown as precipitated from serum, fibrine from a solution of muscular fibrine, and fibrine from solution in blood. Next it was demonstrated that the blood-corpuscles by exerting a condensing effect on the acid, prevented it by their presence from precipitating the colloids; and lastly, it was demonstrated that freshly-drawn defibrinated blood, subjected to carbonic acid under pressure, while it was rendered very dark by the process, on being exposed to the air at 60° Fahr., gave up the acid and seized oxygen in place of it with such avidity that a surface of blood a foot square was changed almost instantaneously from deep-black into bright-red arterial blood. Thus, the lecturer reasoned, carbonic acid on the blood side of the pulmonary vesicular surface is as important a necessity for respiration as is oxygen on the air side. Such are a few of the simple but interesting points of this lecture, of which we need say no more now, since in due course it will appear in our columns in full.—Med. Times and Gazette, May 21, 1870.

*Subcutaneous Division of the Neck of the Thigh-Bone within the Capsular Ligament.*—Mr. WM. ADAMS exhibited to the Medical Society of London a man upon whom he had successfully performed the operation of subcutaneous division of the neck of the thigh-bone within the capsular ligament, for extreme deformity, with bony anchylosis of the hip-joint. The man, L. B., was twenty-four years of age, and the contraction of the hip-joint took place after an attack of rheumatic fever, seven years ago last June. That the case was one of bony anchylosis was proved by the failure of forcible extension under chloroform, when considerable force was used on three successive occasions.

On the 1st Dec. 1869, Mr. Adams divided the neck of the thigh-bone subcutaneously within the capsular ligament, using a long tenotomy knife and a narrow subcutaneous saw with $1^1$ inch cutting edge. After the section of the bone, it was necessary to divide the tendon of the long head of the rectus and of the adductor longus muscles, and to cut through the tensor vaginæ femoris muscle before the leg could be brought into a straight line, and the limb was then bandaged to a long straight splint as a retentive apparatus. The details of the operation were described, and the instruments exhibited to the society. The operation was performed at the Great Northern Hospital. No swelling, redness, or deep suppuration followed the operation, but the wound was slow in healing.

On the 7th December, the house-surgeon, Mr. Willis, reports: "The dressing removed for the first time to-day. A few drops of pus only escaped from the superficial wound. There is no deep suppuration going on. The superficial wound

dressed with carbolic lotion, one part in forty."

Mr. Willis further reports:—

"Dec. 13. The splint was removed altogether to-day. He can draw the leg up almost as well as the sound one, and has very fair motion of the hip-joint.

"Dec. 22d. Going on well. No febrile symptoms or deep suppuration going on. The superficial wound nearly healed. There never has been more than two or three drops of pus on the lint in the morning. Collodion and castor oil applied to-day instead of carbolic-acid lotion. He got up to day for the first time, just three weeks since the operation."

For a fortnight from this date Mr. Adams allowed and encouraged free motion; but, finding that this could not be maintained, and that the limb decidedly began to stiffen, Mr. Adams determined to abandon all idea of obtaining motion, and endeavoured to procure bony anchylosis with the limb in a straight position. The man was ordered to keep to his bed, and the limb to be maintained in a straight position by an extending weight of three pounds suspended over the end of the bed. After being kept in this position for three weeks, the divided neck of the femur seemed to be firmly anchylosed; and on the 24th of January, 1870, he was discharged and transferred to the Royal Orthopædic Hospital, where he still remains. From this date to the present time the recumbent position has generally been maintained with an extending weight, but daily exercise has been permitted, according to the inclination of the patient, two crutches being used at first, and one or two sticks afterwards substituted for them. At the present time he does not require more than one stick, and walks about a good deal every day. He can walk across the ward without a stick or any assistance whatever, but has not sufficient confidence in the limb to do more than this.

He exhibited his power in walking about the room without his stick, and Mr. Adams promised to record the progress of the case when the society reassembled in October next. The success up to the present time seemed to be complete, and there appeared to be every prospect of the man recovering a sound and useful limb.—Lancet, May 28, 1870.

*Paralysis of the Bladder.*—Dr. Van Holsbeck has employed with success electricity in paralysis of the bladder. He introduces an instrument into the bladder, and another into the rectum, connects them with the poles of an ordinary machine, and allows the continuous current to pass for a quarter of an hour. In seven sittings he has cured paralysis which resisted all other remedies.—Med. Press and Circular, May 11, 1870.

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*Treatment of Eczema.*—Dr. Kent Spender, of Bath, has found blackwash useful as an application in eczema rubrum of the legs, mixed with a tenth part by measure of glycerine. Linen rags are soaked in this and laid on the parts, and kept in situ by a bandage, but no oiled silk used. He renews the dressings twice daily, wetting them with warm water before removal. He has recently almost always been successful in such cases by this plan.—Med. Press and Circular, April 13, 1870.

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*Mercurial Suppositories in Constitutional Syphilis.*—Professor Lebert states (*Berlin. klin. Wochenschrift*, April 4) that he has of late had such success in the employment of these that he is desirous of calling attention to their value. They are formed by mixing mercurial ointment with butter of cocoa and white wax so as to obtain a convenient consistence.—Med. Times and Gaz., May 21, 1870.

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*New Instrument for the Operation of Fistula in Ano.*—In a recent case of operation, at the Royal Free Hospital, for fistula in ano, instead of the usual plan of introducing the bistoury through the fistula and bringing it down through the sphincter, Mr. Weeden Cooke used a scissors constructed for him by Messrs. Weiss. The finger having been introduced into the rectum as a guide Mr. Cooke passed one blade of the scissors into the fistula up to its extreme point, and then the other blade into the rectum. The two blades were then connected by a small screw, and by one rapid scissors action the sphincter was divided.

As the position required for this operation renders it unadvisable to give chloroform, and as the patient, unless very carefully held by assistants, often shrinks so

as greatly to embarrass the surgeon, any plan which insures rapidity is advantageous, and it is with this view that the mode of operation described has been suggested. It was thought that it caused less pain than the bistoury.—Lancet, June 4, 1870.

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*The Antiseptic System in Surgery.*—At a recent meeting of the Medical Society of Berlin, the leading surgeons of that city recorded their experience of the carbolic acid treatment of wounds and injuries. Professor Bardeleben stated that, in two hundred and forty-one cases then in hospital, the success of this treatment was fully confirmed. Fifty of these were serious cases; and three of them were compound fractures, which, but for Lister's method, must have been amputated. He had found very good results and less irritation from the use of sulpho-carbolate of zinc, as employed by Mr. Wood of King's College Hospital. Professor Langenbeck stated that, although at first he had the greatest distrust of Lister's method, yet two years' experience of it has now so convinced him of its utility, that hardly any operation was now performed in his clinic without the use of carbolic acid. He also had recently two compound fractures of the leg, which, according to still prevailing doctrines, should have been amputated, but had both run a favourable course under the carbolic acid treatment. Professor Lister, commenting on this discussion in the current number of the "Edinburgh Medical Journal," observes that the "poisonous action" with which M. Bardeleben has met in one of ten cases has not occurred at all in his own practice since lac-plaster was substituted for the paste. The local irritation complained of he ascribes to the omission of the use of a "protective" to guard the wound from the direct action of the acid.—British Med. Journ., May 28, 1870.

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*Results of Operations with and without Chloroform.*—Professor Simonin, of Nantes, read a paper at the meeting of Delegates of Learned Societies, recently held in Paris, detailing the results of his thirty-four years of practice in the same hospital with respect to the great operations, distinguishing those performed prior to, and those subsequent to, the introduction of chloroform. The operations were 250 in number. Of these the results in amputation and hernia are as follows: Amputation of the thigh without anæsthetics 7, with 4 deaths, or 57 per cent.; with anæsthetics 23, and 8 deaths, or 35 per cent. Amputations of the leg 11, and 5 deaths, without anæsthetics, or 45 per cent.; and 14, with 3 deaths, or 21 per cent., with them. Strangulated hernia, 25 operations and 9 deaths (36 per cent) without, and 10 operations with one death, or 10 per cent., with anæsthetics.—Medical Times and Gazette, May 14, 1870.

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*Anæsthetic Mixture.*—M. Sauer, a surgeon-dentist of Berlin, after having performed various comparative experiments with anæsthetic substances, has come to the conclusion that the very best is a mixture of protoxide of nitrogen, chloroform, and atmospheric air. He considers this compound to be free from the dangers attendant on the use of either chloroform or the protoxide alone. The proportions which he advocates and employs are the following: liquid chloroform, six grammes; atmospheric air, three-quarters of a litre; and protoxide of nitrogen, sixteen litres.—Lancet, May 21, 1870.

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*Death from Chloroform.*—A case of this occurred at University College Hospital, May 3d last. The subject of it was a man, æt. 42, suffering from stricture and stone in the bladder. Clover's apparatus was used, containing thirty minims of chloroform in each thousand cubic inches of air. In five or six minutes the patient was insensible, and began to breath stertorously. As the sound was being introduced the man's pulse suddenly became extinct, and the face blue and pale as in epilepsy. Sylvester's method of artificial respiration was put in force for twenty minutes, and galvanism was applied over the heart; but the man did not revive. The heart was found to be loaded with fat, and, under the microscope, a large quantity of interstitial fat was seen.—Brit. Med. Journ., May 14, 1870.

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*Suppression of Pain after Operations.*—At the last meeting of the Imperial Academy, M. Sedillot submitted a note on "The Suppression of Pain after Operations." He observed that a patient may undergo an operation in a state of absolute insensibility, but a state of suffering awaits his arousing from this condition, which it

should be our object to avert. Opiates, refrigerants, chloral, etc., have been tried with this object without attaining it. The various kinds of cauterization render traumatic surfaces insensible and exempt from accidents. The actual cautery effects this, but the rapidity with which it cools, and the superficial character of its action, much restricts its employment. M. Nélaton tried the gas cautery, but the eschars this produces are too superficial, and the same may be said of those induced by a flame of oxygen and hydrogen experimented on by M. Sédillot. Of all measures of this kind the electric cautery, as perfected by the late Prof. Middledorpff, of Breslau, is the best and most certain. The degree of heat can be instantly varied as desired, rendered intermittent or continuous, and directed into the deepest cavities, or employed for the division of every description of tissues. To prevent loss of blood, it must be employed at a white heat, taking care to divide or destroy the tissues with extreme slowness. In this way M. Sédillot has performed numerous operations without loss of blood, and with great success. Burns, he observes, of the third degree cause but little pain; and he has seen persons mortally burnt preserving for several days their appetite and sleep and hopes of cure. This absence of suffering in the severest burns is explained by the de struction of the nerves. And in the same way the electric cautery renders the wound it causes insensible, so that persons operated upon by its agency under chloroform experience on awakening no suffering. Later, at a period varying from the third to the ninth day, an inflammatory reaction is set up, but it is generally very slight, fever either being entirely wanting or soon ceasing.—Medical Times and Gazette, May 14, 1870.

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*Chloral an Antidote of Strychnia.*—In a communication to the last issue of the "Pharmaceutical Journal," Mr. Groves, of Weymouth, narrates his experience on this important subject. He says: "A large spaniel picked up some bread-and-butter that had been prepared with Battle's killer for the destruction of mice, and ate an uncertain quantity of it. The first intimation I had was the dog's being seized with violent tetanic spasms. I at once attempted to administer an emetic of tartarized antimony, but succeeded in getting her to swallow not more than three grains, which had no immediate effect. At 3.30, the dog apparently dying, it occurred to me to try chloral. A solution was prepared of one drachm of the hydrate in one ounce of water, and of this a teaspoonful was administered every few minutes when an opportunity presented itself. Doubtless not less than a third part was wasted, as the least excitment brought on a violent spasm. The odour of chloroform was soon apparent in the dog's breath, and a manifest improvement was simultaneously observed in the less rigid cordition of the body generally. After half an hour her state had so much improved that I considered her cured. Such, however, was not the case, for the spasms soon after returned, but with mitigated severity. I therefore administered half a drachm more of the hydrate in the same manner as before, and with the same results. Two hours after the first dose of chloral all symptoms of tetanus had disappeared, the dog appearing a little drowsy and fatigued, but not sufficiently so to cause sleep. Notwithstanding that not less than one drachm of pure hydrate of chloral had been taken, she did not show the slightest tendency to coma. As soon as she was well enough to run about the emetic took effect, relieving her stomach of a considerable quantity of half digested food. At 12 P.M. her pups were allowed to suckle, and, strange to say, no injurious results to them followed."—Med. Press and Circular, May 18, 1870.

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*Manganese in Blood and Milk.*—A memoir has just been read at the Royal Academy of Sciences of Italy, by Professor Polucci, announcing a great discovery. It is the constant presence of manganese in the human blood. In more than twenty analyses of the blood of persons of different sexes, professions, health, and temperaments, there was always found a certain proportion of manganese.

One of the consequences of this fact is that the metal ought to be also found in milk. Submitted to experiment this deduction is entirely confirmed. In thirty-four analyses of milk, twenty-three of which were human, four from the cow, and four from the goat, the presence of manganese was constantly observed.—Med. Press and Circular, May 18, 1870.

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*Smallpox; Vaccination.*—Smallpox has prevailed extensively in Paris lately, and there being a great scarcity of the Jenne-

rian virus, recourse was had to heifers for the virus. The result has been most unsatisfactory, and animal vaccination has fallen into entire discredit there. Dr. Baudry, in an article in *L'Union Médicale*, 29th March, 1870, calls attention to the fact that the Jennerian virus did not originate in the cow but in the horse, and that the disease was communicated from the latter to the former animal, and, after passing through its system, was used by Jenner as a protection against smallpox. He strongly urges the propriety of seeking in the horse for the virus, and after causing it to pass through the system of the cow it should then be transferred to the human system. This would undoubtedly furnish us with the true Jennerian virus. The virus obtained from the vesicles of a cow, inoculated with smallpox, is probably altogether a different virus.

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*Smallpox in Paris.*—The rule laid down by M. Besnier (see preceding No., p. 94) that smallpox always prevails most extensively in winter, and that it abates in the spring, and still more in summer, has not been verified. On the contrary, during the spring and summer the disease has increased during the latter periods in Paris. In this city the mortality from the disease during the week ending May 21st was 195, and during the following week ending May 28th was 215. All the quarters of Paris have been more or less severely visited; but those which have undergone the most cruel ravages are the 10th, 11th, 12th, 17th, 18th, 19th, and 20th arrondissements, namely, the more densely and poorly populated districts. The disease does not confine its attacks to the poorer classes, however; the wealthier circles of the Parisian population have paid a large tribute to the mortality; and among those who are now suffering from the malady I may just mention the names of the Duke de Caumont-Laforce, and of Prince de la Tour d'Auvergne, former ambassador to London. A few days ago one of the children of Prince Napoleon was hurried away to Mentone, as he presented symptoms which threatened an attack of the disease.

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*Liebig on Fermentation.*—An important paper by Baron Liebig was laid before the Bavarian Academy of Sciences a short time ago, and is to be found in the January number of the "Annalen der Chemie und Pharmacie." According to commonly received doctrines fermentation is a vital act, the transformation of grape sugar into alcohol and carbonic acid being a part of the development of the yeast plant. Though commonly ascribed to Pasteur, who is its most prominent supporter, this theory is, in reality, an old one, having been enunciated with the utmost distinctness before Pasteur's time. In opposition to it Liebig brings forward the following formidable objection: The yeast plant consists in a great part of highly nitrogenized material, containing, moreover, sulphur and an appreciable amount of phosphates. Now, the yeast plant will bring about fermentation even in a pure solution of sugar. The yeast plant cannot grow when it is not supplied with nitrogenous matter and phosphates; therefore the transformation of sugar into alcohol and carbonic acid cannot be a part of the growth of the plant, and must be due to something else.

In order to exhibit the utter inadequacy of amount of growth of the yeast plant to admit of fermentation being looked upon as a part of that development, Liebig quotes one of Pasteur's experiments. 9899 milligrammes of sugar were fully decomposed by the action of a very little yeast, and after the termination of the fermentation the quantity of yeast plant was weighed, and found to be 152 milligrammes. Of these 152 milligrammes less than 30 milligrammes consisted of cellulose. Liebig asks, are we to regard the assimilation of this 30 milligrammes of cellulose as the reason of the conversion of 9869 milligrammes of sugar into carbonic acid and alcohol?

Yeast is capable of causing a breaking-up of malate of lime into carbonic acid, carbonate, acetate, and succinate of lime. A number of other chemical transformations are also affected by the action of yeast upon various organic substances.

Liebig's theory of fermentation is that it is a purely chemical or physico-chemical process. The breaking up of sugar into carbonic acid and alcohol he places side by side with the decomposition of anhydrous acetic acid into acetone and carbonic acid (a change brought about by heat), and with the change of an aqueous solution of cyanogen gas into oxamide, which is brought about by the action of the merest trace of aldehyde.

Just as the vibration produced by the aldehyde determines the rearrangement of the atoms of cyanogen and water so as to constitute oxamide, so Liebig regards the rearrangement of the atoms of sugar as the result of a vibration produced by the chemical changes which take place in some unstable substance produced by the yeast plant. The growth of the yeast plant is, according to this idea, only remotely connected with the process of fermentation. We quote the following passage from Liebig's paper:—

"It is possible that the physiological process stands in no other relation to the process of fermentation than that, by means of it, a substance is formed in the living cell, which, by an action peculiar to it—resembling that of emulsin on salicin or amygdalin—determines the decomposition of sugar and other organic atoms. In such a case the physiological action would be necessary for the production of this substance, but would be otherwise unconnected with the fermentation properly so called."

In harmony with this view, Liebig finds that the "washings" of yeast (which contain no yeast plant) have the property of instantly converting cane-sugar into grape-sugar. And, holding to his theory, he anticipates that other very alterable complex substances, besides products of the yeast plant, will be found to possess the property of setting up that vibration which rearranges grape-sugar into alcohol and carbonic acid, and which we call the process of alcoholic fermentation.

In a footnote Liebig calls the attention of chemists to Schunck's observations on the peculiar ferment occurring in madder, and which seems to possess the property in question.—Med Times and Gaz., Feb. 26, 1870.

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*Chemistry of Entire Wheat Flour.*—A great deal has been stated of late relative to the importance, in a dietetic point of view, of consuming the entire wheat grain, in place of that which is now commonly used. The reason given, as is well known, is that the branny parts of the grain contain the earthy salts, which go to form bone in particular, and the cerealin, or peculiar body which changes starchy matter into dextrine Whilst we have, on more than one occasion, commended the use of entire wheat flour, and condemned that of mere starchy compounds, especially in the case of the young, we have counselled the subtlest pulverization of the branny portion of the grain, so that its irritant qualities may be destroyed, and appealed to the chemist for a more complete analysis of the entire wheat flour, and particularly of the latter after it has undergone the ordinary process of cooking or roasting, so as to determine the changes undergone through the agency of the cerealin, and in the cerealin itself. Professor Attfield has just made a careful analysis of Chapman and Co.'s wheat flour, and supplied us with the information we needed. He finds that this flour, *au naturel*, contains 15.2 per cent. of moisture, 14.1 of gluten, 1 62 of phosphates, and 1.91 of cerealin. By the application of heat, as in gentle roasting, a portion of the natural moisture escapes, and the starch is in part changed. The amount of moisture is 10.8 per cent., of the gluten 15, of phosphates 1.65, and cerealin 1.2, in the roasted flour, which, in fact, is richer in flesh-and bone-forming substance than before. Moreover—and this is a most important fact—six-tenths of the cerealin remains in the soluble state, to act as the digestor of starchy foods taken into the stomach with it. It was especially as regards the state of the cerealin in cooked flour that we needed information. The fine ground flour of the entire wheat grain is proved, therefore, to be altogether the most desirable for general consumption, and we hope it will take the place of the purely starchy compounds now in use, both in the case of children and of adults.—Lancet, April 2, 1870.

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*Injections of Liqueur de Villate in Carious Bone.*—M. Nélaton employs (Union Méd., May 31) the following modification of the above liquid as an injection to be thrown into the fistulous tracts connected with carious bone: Acetic acid 100, sulphate of copper and sulphate of zinc of each 10, and acetate of lead 5 parts. There is a considerable precipitate, so that the solution requires shaking before employing it.—Med. Times and Gaz., June 11, 1870.

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Obituary Record.—Died, at Leeds, June 1st, 1870, aged 61, after a short illness, Thomas Nunneley, F.R.S., one of the most eminent provincial surgeons of England, and the leading surgeon, occulist, and medical jurist of Leeds.

At Paris, May 27th, 1870, Dr. Joseph Alexander Auzias-Turenne, aged 59.

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